REMARKS

This Response is submitted in reply to the final Office Action dated July 7, 2009, and the Advisory Action dated September 18, 2009, issued in connection with the above-identified application. A request for continued examination (RCE) is provided with this response. Claims 1-11 are pending in the present application. With this Response, no claims have been amended, and no new matter has been introduced. Favorable reconsideration is respectfully requested.

In the Office Action, claims 1-11 have been rejected under 35 U.S.C. 102(b) as being anticipated by Keiichi Murakami (Japanese Application No. 2000-332387, hereafter "Murakami"). The Applicants assert that the cited prior art fails to disclose or suggest all the features recited in at least independent claim 1.

Claim 1 recites the following features:

"[a] method for manufacturing a printed wiring board which includes forming a thermosetting resin layer so as to fill spaces between circuit patterns formed on a surface of the printed wiring board, heating and curing the resin layer, and then polishing the cured resin layer covering the circuit patterns, thereby exposing the circuit patterns, wherein the step of heating and curing the resin layer comprises:

maintaining the resin layer at a non-curable temperature where the resin layer is pressed via a smoothing plate in a reduced pressure environment;

heating the resin layer in the pressed state to a curing temperature at which the resin layer is cured;

introducing outside air into the reduced pressure environment while maintaining the pressed state and the curing temperature;

reducing the pressure applied to the smoothing plate while maintaining the curing temperature; and

cooling the resin layer,

wherein a metallic foil with a roughened surface facing the resin layer is superposed on the resin layer." (Emphasis added).

The present invention (as recited in independent claim 1) is distinguishable from the cited prior art in that the method of manufacturing a printed wiring board of the present invention introduces outside air into the reduced pressure environment while maintaining the pressed state and the curing temperature; and reduces the pressure applied to the smoothing plate while

maintaining the curing temperature.

By adopting the process of "introducing outside air into the reduced pressure environment while maintaining the pressed state and the curing temperature," the surface of the resin layer is cooled by the introduced outside air. As a result, the surface of the resin layer begins to set (i.e., hardening) preventing excessive outflow of resin, but the voids contained in the resin layer disappear by atmospheric pressure due to the resin layer not yet being completely hardened (i.e., due to maintaining the curing temperature). (See e.g., ¶ [0011]).

In the Office Action, the Examiner relies on Murakami for disclosing or suggesting all the features recited in independent claim 1. Additionally, in the Advisory Action, the Examiner asserts that Murakami discloses a process of pressing with a stainless steel plate, heating and hardening a resin under vacuum to keep bubbles out of the resin (Paragraphs 17 & 18). Then (in the process) the stainless steel plate is removed for resin polishing, which requires releasing the vacuum pressure by introducing outside air and letting the resin settle before removal of the stainless steel plate (Paragraph 19).

The Examiner asserts that the process in Murakami requires removal of the vacuum pressure to slowly cool down the heated enclosure by introducing outside air while the stainless steel plate is still under pressure. The temperature is lowered by the outside air before the stainless steel plate can be removed for polishing of the resin (Paragraph 19). Therefore, (the Examiner asserts) Murakami discloses or suggests "introducing outside air into the reduced pressure environment while maintaining the pressed state and the curing temperature; and reducing the pressure applied to the smoothing plate while maintaining the curing temperature."

However, the Applicants assert that the process disclosed by Murakami fails to include "introducing outside air into the reduced pressure environment while maintaining the pressed state and the curing temperature; and reducing the pressure applied to the smoothing plate while maintaining the curing temperature."

Although Murakami discloses that it is necessary to introduce outside air into the reduced pressure environment and to reduce the pressure applied to the stainless steel plate (i.e., before removing the stainless steel for polishing), nothing in Murakami discloses or suggests that the pressed state of the stainless steel plate is maintained (along with the curing temperature) while the outside air is introduced into the reduced pressure environment.

Additionally, Murakami fails to disclose or suggest introducing outside air prior to reducing the pressure applied to the stainless steel plate. That is, in the present invention (as recited in independent claim 1) the process requires introducing outside air first, next reducing the pressure and then cooling the resin (e.g., shown Fig.7). To the contrary, Murakami merely discloses that vacuum pressure is removed in a reduced pressure environment by introducing outside air, which (at best) slowly reduces the pressure and temperature of both the reduced pressure environment and the stainless steel plate.

Thus, Murakami fails to disclose or suggest all the steps of manufacturing a printed wiring board of the present invention (as recited in independent claim 1). In particular, Murakami fails to disclose or suggest "introducing outside air into the reduced pressure environment while maintaining the pressed state and the curing temperature; and then reducing the pressure applied to the smoothing plate while maintaining the curing temperature.

Based on the above discussion, independent claim 1 is not anticipated or rendered obvious by Murakami. Likewise, claims 2-11 are not anticipated or rendered obvious by Murakami at least by virtue of their dependencies (directly or indirectly) from independent claim 1.

In light of the above, the Applicant respectfully submits that all the pending claims are patentable over the prior art of record. The Applicants respectfully request that the Examiner withdraw the rejections presented in the outstanding Office Action, and pass the application to issue. The Examiner is invited to contact the undersigned attorney by telephone to resolve any remaining issues.

Respectfully submitted,

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